Lake Erie Harmful Algal Bloom Bulletin

22 July, 2019, Bulletin 07

Analysis

A *Microcystis* cyanobacteria bloom is present in the western basin of Lake Erie. Recent satellite imagery is obscured by clouds, limiting analysis. MODIS imagery from 7/20 shows the bloom present north along the Michigan coast to Brest Bay, and offshore from Maumee bay to West Sister Island. Sampling from 7/15 still indicates toxin concentrations have increased, but remain below the recreational threshold. Observed winds (7/19-21) promoted mixing of surface concentrations, though scum was intermittently observed along the Ohio Coast. *Keep pets and yourself out of the water in areas where scum is forming*. The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are present in Lake Erie.

Forecasts

Winds (5-18 kn) forecast today through Thursday (7/22-25) may promote additional mixing and southeast transport of surface *Microcystis* concentrations. –Keeney, Jima

Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: *http://publicapps.odh.ohio.gov/beachguardpublic/*
Ohio EPA's site on harmful algal blooms: *http://epa.ohio.gov/HAB-Algae*
NOAA's GLERL provides additional HAB data here: *http://www.glerl.noaa.gov/res/HABs_and_Hypoxia*

The images below are "GeoPDF". Please visit https://go.usa.gov/xReTC for instructions on viewing longitude and latitude.

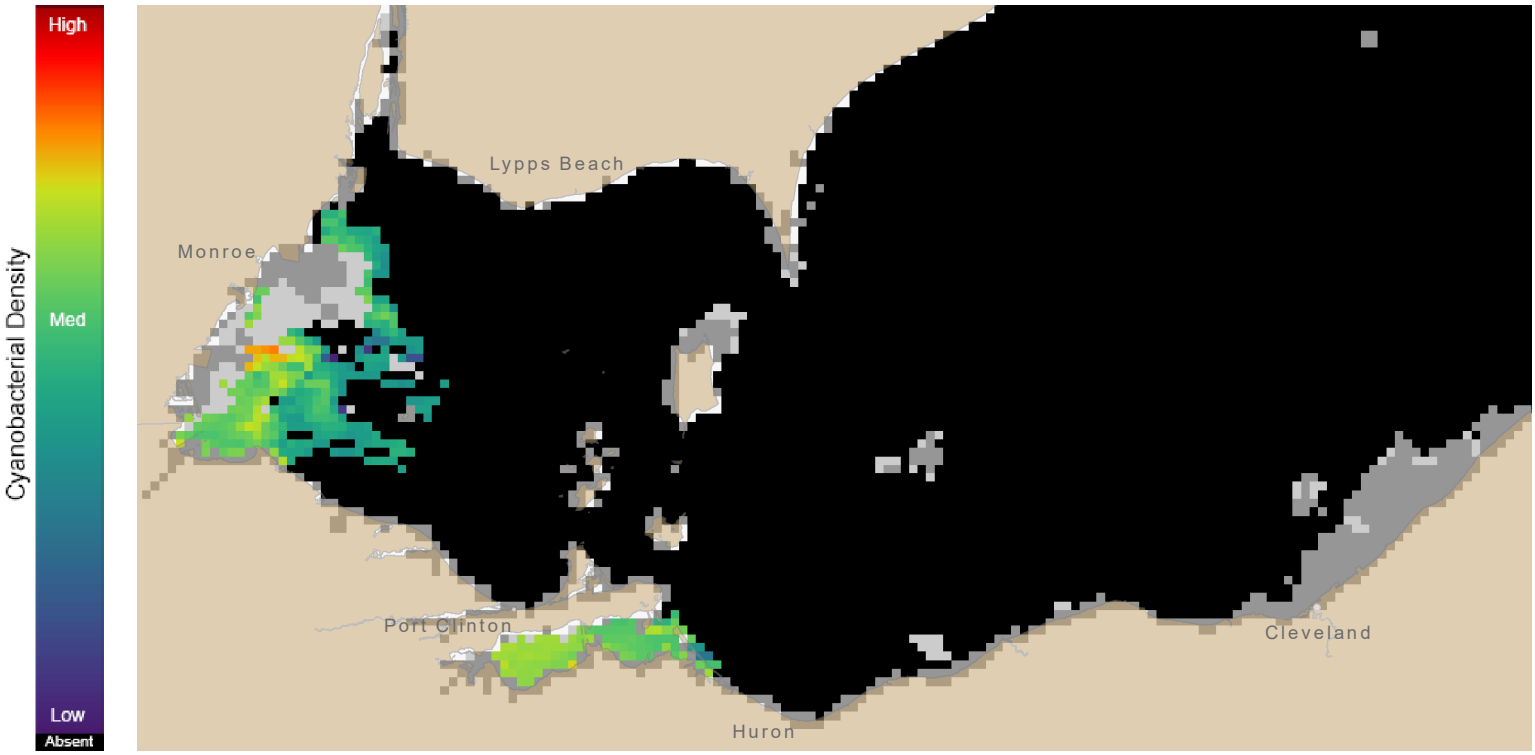


Figure 1. Cyanobacterial Index from NASA MODIS-Terra data collected 20 July, 2019 at 11:05 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

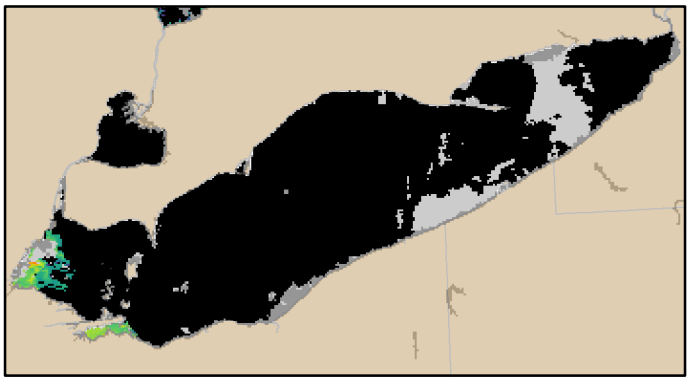
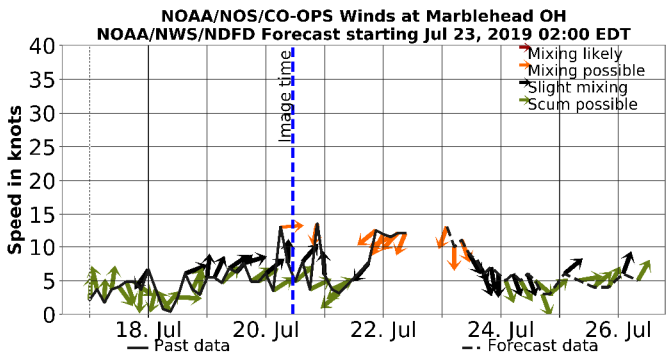


Figure 2. Cyanobacterial Index from NASA MODIS-Terra data collected 20 July, 2019 at 11:05.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

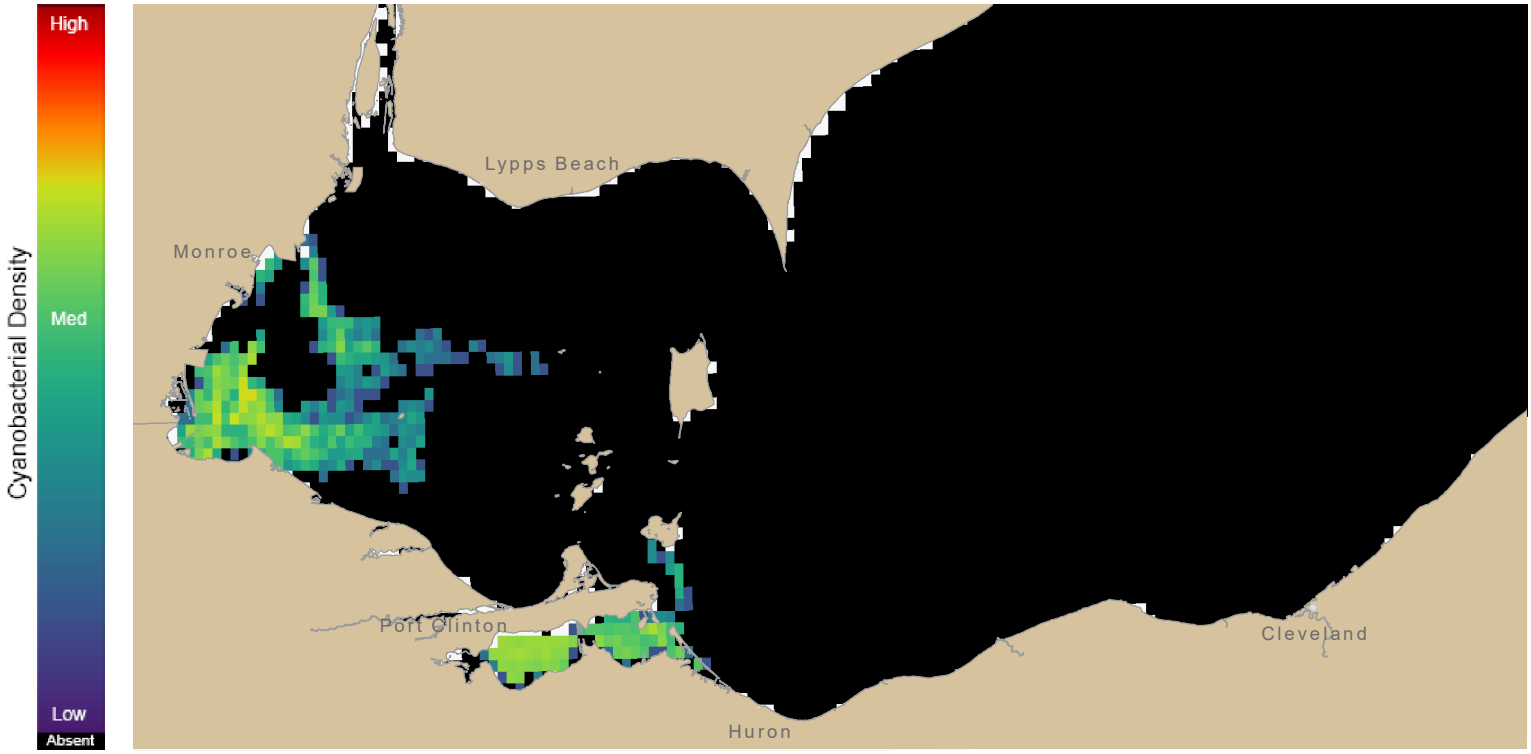
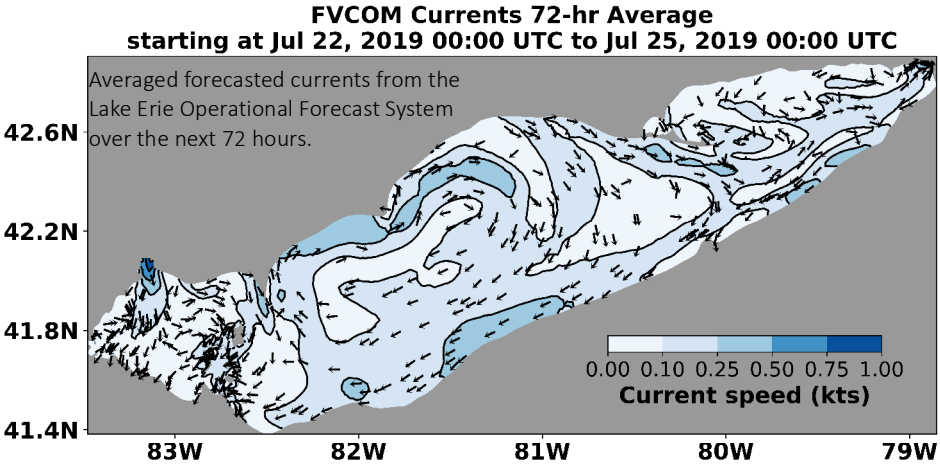


Figure 3. Nowcast position of bloom for 22 July, 2019 using LEOFS modelled currents to move the bloom from the 20 July, 2019 image.

Figure 4. Forecast position of bloom for 25 July, 2019 using LEOFS modelled currents to move the bloom from the 20 July, 2019 image.



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